

APPLIED WELFARE ECONOMICS AND POLICY ANALYSIS

● Introduction

■ What is welfare economics?

Framework where *normative* significance of economic events is evaluated

e.g., use of stated *ethical* criteria to judge desirability of a particular public policy

■ Investigation of methods of obtaining a *social ordering* over different *states of the world*

- a state of the world refers to a particular resource allocation

- a social ordering allows a comparison and ranking of all states of the world, ideally it should be complete and transitive

- ranking of social states is inevitably based on *value judgements*

■ *Economic efficiency* typically used to order social states, based on two value judgements:

- social ordering should be based on *individual preferences*, i.e., each individual is best judge of their own well-being

- the *Pareto principle*, i.e., if state A is ranked higher than state B by one individual, and all other individuals rank state A at least as high as state B \Rightarrow A should be ranked higher than B in social ordering

■ Problem with Pareto principle - generates only *partial* ordering of social states, i.e., cannot compare two states where one is preferred by one or more individuals, and other is preferred by one or more other individuals

■ Normative analysis of economic efficiency still proceeds with these rather weak value judgements, generating link between *competitive equilibrium* and Pareto principle:

➤ *First Welfare Theorem*: General equilibrium of a perfectly competitive economy is *Pareto optimal*

➤ *Second Welfare Theorem*: Any Pareto optimum can be achieved by solution to a general equilibrium in a competitive economy

- Failure of assumptions underlying these theorems generates *market failure* - welfare economics then concerns identification of inefficiencies and policies to deal with them
- Latter ties in with *public economics* - unregulated economic activity does not necessarily result in a socially optimal outcome, e.g., must be clearly defined and enforced set of *contract laws* - costly to enforce, requiring collection of revenue
- Even in the absence of market failure, Pareto principle still of rather limited use - there are many such allocations which are themselves non-comparable
- Pareto principle has been extended to the *hypothetical compensation* criterion:

As long as those who are better off in state A compared to state B can, in principle, compensate those who are worse off, state A will be ranked higher than state B

Criterion is used extensively in applied welfare economics, e.g., *cost-benefit* analysis

- **The compensation test is itself based on a strong value judgment - hypothetically being made better off may be of little consolation to someone who is made worse off!**

- **Welfare economics goes beyond the concepts of efficiency embodied in the Pareto principle - involves devising a means of weighting individual utilities, which requires stronger value judgments**

- **Such value judgments are captured in the *social welfare function (swf)* or *ordering***

- **Choice of swf is constrained by ethical assumptions and information available on individual utilities**
 - **least restrictive assumption is *ordinal* measurement of utility and *non-comparability* of individuals**

 - **generates a very restrictive set of functions, and violates reasonable assumptions relating to equity**

 - **as comparability and measurability assumptions are strengthened, choice of functions expands**

- A relatively weak set of ethical judgments will result in a *swf* that is *welfaristic* - i.e., *swf* depends only on individual utilities
- With strong measurability and comparability assumptions, there are many welfaristic functions that can be chosen among

Other ethical judgments can be added, e.g., inclusion of an *egalitarian ethic*

- Welfare economic theory is designed to produce an *ordering* of social states, while applied welfare economics often focuses on how to *measure* changes in welfare as resource allocations change with policy
- To some extent choice of measurement scheme is arbitrary - given a ranking of social states, there are many means of measurement that would preserve the ordering
- Typically, applied welfare economics uses a *money metric* to measure welfare change, i.e., amount of money required to attain various utility levels at a set of reference prices

- **Focusing on the individual, welfare change is an estimate of the change in the value of the money metric due to a change in either the consumption bundle or a change in prices/income - typically use either the *compensating* or *equivalent variation***

- **In practice, we observe aggregate commodity bundles rather than individual bundles, so the problem of applied welfare economics becomes one of measuring welfare change in a many-consumer economy consistent with the ordinal *swf***

- **Culmination of this effort is cost-benefit analysis or project evaluation**

- **Course Outline:**
 - **General equilibrium, Pareto optimality and the Welfare Theorems**
 - **Social welfare functions**
 - **Theory of welfare change measurement**
 - **Commodity and income taxation**
 - **Market failure and the theory of second-best**
 - **Income measurement issues**
 - **Applied welfare change measurement**